

GENIE

- 1) *New GENIE release*: Need a new release with all recent improvements in GENIE so that MINERvA and MicroBoone can use. Also a roadmap of GENIE releases so that we know what to expect
- 2) *Tuning GENIE*: In many of our analyses we see discrepancies between GENIE and our data, plan to use new data tune GENIE parameters and their uncertainties?
- 3) *Alternate models*: Currently to test alternate models, we have to use NuWro which implements more models and theoretical calculations. Need capability to easily switch between available models. Anything reweight-able should be reweight-able. For example, currently to use different hadronization we have to re-run GENIE, it would be better if it can be reweighted
- 4) *Build hacks*: We have a couple of build hacks. For example, to use the flux ntuple with neutrino ancestry, we have to modify the flux ntuple format. Can GENIE make it so that we don't have to re-compile to use a different flux ntuple format?

GEANT4

- 1) Need capability to run detector simulation with cross sections shifted from nominal values to generate detector response error bands or to handle this using reweighting